AMENDMENTS TO THE SPECIFICATION:

Page 1, please add the following new paragraphs before paragraph [0001]:

[0000.2] CROSS-REFERENCE TO RELATED APPLICATIONS

[0000.4] This application is a 35 USC 371 application of PCT/DE 03/03323 filed on October 7, 2003.

[0000.6] BACKGROUND OF THE INVENTION

Please replace paragraph [0001] with the following amended paragraph:

[0001] ~~Prior Art~~ **Field of the Invention**

Please replace paragraph [0002] with the following amended paragraph:

[0002] The invention is ~~based on a~~ **directed to an improved** fuel injection system for an internal combustion engine ~~according to the preamble to claim 1~~.

Please add the following new paragraph after paragraph [0002]:

[0002.5] Description of the Prior Art

Please replace paragraph [0003] with the following amended paragraph:

[0003] A fuel injection system of ~~this kind~~ **the type with which this invention is concerned** is known from DE 101 32 732 A[[.]] ~~This fuel injection system~~ **and** has a respective high-pressure fuel pump and a fuel injection valve connected to it for each cylinder of the internal combustion engine. The high-pressure fuel pump has a pump piston that is driven into a stroke motion and delimits a pump working chamber. The pump working chamber can be connected to a low-pressure region via a connection controlled by a first electrically actuated control valve. The fuel injection valve has an injection valve element that controls at least one injection opening and that is acted on in an opening direction by the pressure prevailing

in a pressure chamber connected to the pump working chamber. An electrical control element controls an opening and closing motion of the injection valve element. The fuel injection valve here has a control pressure chamber that can be connected to the pump working chamber and can also be connected to a relief region via a connection controlled by the control element, which is embodied as a second electrically actuated control valve. A pressure reservoir is also provided into which fuel is delivered by the high-pressure fuel pump and which is connected to the pressure chamber of the fuel injection valve. Fuel can be drawn from the pressure reservoir for an injection, independent of the delivery by the high-pressure fuel pump. In particular, this permits a secondary injection of high-pressure fuel, which can occur at a time when the high-pressure fuel pump has already stopped delivering fuel. A secondary injection of this kind is advantageous for reducing emissions of the engine, especially particulate emissions. The connection of the pump working chamber and pressure chamber to the pressure reservoir contains a throttle restriction and, parallel to this, a check valve that opens toward the pressure chamber. A filling of the pressure reservoir with fuel occurs only via the throttle restriction, which must be large enough to permit a sufficient filling of the pressure reservoir even when the pressure generated by the high-pressure fuel pump is not very high and when the fuel injection quantity is low. In addition, after the termination of fuel injection, a high pressure must be maintained in the pressure chamber in order to be able to deliver a large fuel quantity into the pressure reservoir, which requires a large amount of driving work from the high-pressure fuel pump, thus resulting in a poor efficiency of the fuel injection system. Because of the significant pressure differences between the pressure reservoir on the one hand and the pump working chamber and pressure-

relieved pressure chamber on the other, an expensively designed check valve is required in order to assure a reliable seal between them.

Page 2, please replace paragraph [0004] with the following amended paragraph:

[0004] ~~Advantages of the Invention~~

SUMMARY AND ADVANTAGES OF THE INVENTION

Please replace paragraph [0005] with the following amended paragraph:

[0005] The fuel injection system according to the invention[[~~,~~]] ~~with the features according to claim 1,~~ has the advantage over the prior art that the coupling device with the piston permits a simply designed connection of the pressure reservoir to the pressure chamber and pump working chamber and does not require a sealing seat. For a fuel injection independent of the delivery by the high-pressure fuel pump, the piston executes a delivery stroke oriented toward the pressure chamber.

Page 3, please replace paragraph [0006] with the following amended paragraph:

[0006] Advantageous embodiments and modifications of the fuel injection system according to the invention are disclosed. ~~in the dependent claims. The~~ **On** embodiment ~~according to claim 2 or 3~~ provides a simple bypass connection[[~~.~~]] ~~In the embodiment according to claim 4,~~ **and in another** the bypass connection can be embodied with a small flow cross section since the pressure reservoir is also filled by means of the stroke of the piston of the coupling device. ~~The~~ **One** modification ~~according to claim 6~~ assures that the piston assumes a definite starting position from which the piston executes a stroke for fuel delivery into the pressure

reservoir or a delivery stroke toward the pressure chamber. ~~The~~ **Another** embodiment ~~according to claim 7 likewise~~ assures that the piston assumes a definite starting position from which the piston executes a delivery stroke toward the pressure chamber; the pressure reservoir is filled only via the bypass connection.

Please replace paragraph [0007] with the following amended paragraph:

[0007] ~~Drawings~~ **BRIEF DESCRIPTION OF THE DRAWINGS**

Please replace paragraph [0008] with the following amended paragraph:

[0008] ~~Several exemplary embodiments of the invention are depicted in the drawings and will be explained in detail in the description that follows.~~ **Other features and advantages of the invention will be apparent from the description contained herein below, taken in conjunction with the drawings, in which:**

Page 4, please replace paragraph [0012] with the following amended paragraph:

[0012] ~~Description of the Exemplary Embodiments~~

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Page 12, please replace paragraph [0023] with the following amended paragraph:

[0023] Fig. 2 shows a detail of the fuel injection system according to a second exemplary embodiment, in which the basic design is the same as in the first exemplary embodiment and only the coupling device 170 has been modified. The coupling device 170 has the cylinder bore 172 in which the piston 174 is guided in a sliding fashion. The bypass connection is constituted by a small diameter annular gap 176 between the cylinder bore 172 and the outer

circumference of the piston 174, which annular gap ~~also~~ constitutes a throttle restriction. In the second exemplary embodiment, however, the bypass connection can also be embodied the same as in the first exemplary embodiment, in the form of a conduit that contains a throttle restriction and extends through the piston 174. Spring elements 178 and 180 that are embodied as helical compression springs engage the piston 174 at both ends. The spring 178 that engages the end surface of the piston 174 oriented toward the pressure reservoir 68 acts on the piston 174 in the direction oriented away from the pressure reservoir 68 and the spring 180 that engages the end surface of the piston 174 oriented away from the pressure reservoir 68 acts on the piston 174 in the direction oriented toward the pressure reservoir 68. Between two successive injection cycles, the two springs 178, 180 hold the piston 174 in a middle position depicted with solid lines in Fig. 2, between its two end positions. During fuel delivery into the pressure reservoir 68 as part of an injection cycle, the piston 174 is slid from its middle position into its end position oriented toward the pressure reservoir 68. The piston 174 remains in this end position until a withdrawal of fuel from the pressure reservoir 68 produces a secondary fuel injection in which the piston 174 is slid past its middle position into its end position oriented away from the pressure reservoir 68. After the end of the secondary injection and therefore after an injection cycle, the springs 178, 180 move the piston 174 back into its middle position. At the beginning of fuel delivery by the high-pressure fuel pump 10 during the next injection cycle, the piston 174 is therefore always disposed in its definite middle position, which is its starting position. The remaining functions of the fuel injection system according to the second exemplary embodiment are the same as in the first exemplary embodiment.

Page 13, please replace paragraph [0024] with the following amended paragraph:

[0024] Fig. 3 shows the fuel injection system according to a third exemplary embodiment in which once again, only the coupling device 270 has been modified in relation to the first exemplary embodiment. The coupling device 270 has the cylinder bore 272 in which the piston 274 is guided in a sliding fashion. The piston 274 contains the bypass conduit 276 with the throttle restriction 277. Alternatively, the bypass conduit can also be embodied as in the second exemplary embodiment, in the form of an annular gap between the piston 274 and the cylinder bore 272. A spring element 280 in the form of a helical compression spring engages the end surface of the piston ~~270~~ **274** oriented away from the pressure reservoir 68 and acts on the piston 274 in the direction of its end position oriented toward the pressure reservoir 68. Between two successive injection cycles, the spring 280 holds the piston 274 in its end position oriented toward the pressure reservoir 68, which position is depicted with solid lines in Fig. 3. During an injection cycle, fuel is delivered into the pressure reservoir 68 only via the conduit 276; the throttle restriction 277 must be large enough to permit a sufficient filling of the pressure reservoir 68. The piston 274 remains in this end position until a withdrawal of fuel from the pressure reservoir 68 results in a secondary injection of fuel during which the piston 274 is slid into its end position oriented away from the pressure reservoir 68. After the end of the secondary injection and therefore after an injection cycle, the spring 280 moves the piston 274 back into its end position oriented toward the pressure reservoir 68. At the beginning of fuel delivery by the high-pressure fuel pump 10 in the next injection cycle, the piston 274 is therefore always disposed in its definite end position oriented toward the pressure reservoir 68, which is its starting position. The remaining

functions of the fuel injection system according to the ~~second~~ **third** exemplary embodiment are the same as in the first exemplary embodiment.

Page 14, please add the following new paragraph after paragraph [0024]:

[0025] The foregoing relates to preferred exemplary embodiments of the invention, it being understood that other variants and embodiments thereof are possible within the spirit and scope of the invention, the latter being defined by the appended claims.